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| 09/551,408      | 04/18/2000  | Yehuda Ivri          | 16770-002721US      | 2446             |

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07/29/2002

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EXAMINER

DAWSON, GLENN K

ART UNIT

PAPER NUMBER

3761

DATE MAILED: 07/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/551,408

Applicant(s)

IVRI ET AL.

Examiner

Glenn K Dawson

Art Unit

3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 40-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3761

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 3761

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivri, et al.-5586550 or Gueret-5529055 in view of Abys, et al.-5976344 or Marks, et al.-4685491.

6. Ivri and Gueret disclose the general method of applying a liquid to an apertured plate, and vibrating the plate causing the liquid to dispense as droplets. However, the electroforming the plate of palladium or palladium alloys is not disclosed.

7. Abys discloses that electroplating is a well-known process for providing a coating upon a substrate to improve its resistance to corrosion, abrasion or diffusion.

Electroplating is an efficient process for providing a controlled amount onto a specified area. The bath used to deposit the alloy on the substrate is versatile enough to deposit alloy compositions with between 10%-95% palladium. Palladium has been plated over nickel to provide a low contact resistance and corrosion resistance. Palladium-nickel alloy increases hardness, corrosion resistance and wearability, whereas palladium-cobalt improves hardness, corrosion resistance and reduces allergenic effects. It is also known that the thickness of the plating may vary depending on the application or need and availability of product. In fact if cost is not a significant factor it is also considered to

Art Unit: 3761

be obvious to form most of the plate out of these materials while reducing the size of the substrate in order to maximize the effectiveness of the plate.

8. It would have been obvious to have made the vibrating plate of Ivri or Gueret by electroforming the plate out of palladium, palladium-nickel or palladium-cobalt as a matter of design choice as it would enhance the corrosion resistance of the plate and therefore prevent degradation due to contact with the liquid drug applied thereto. In fact the applicant has failed to disclose any criticality as to the materials of the plate being palladium or palladium alloy, palladium nickel or palladium cobalt and alone would be an obvious design choice as the examiner considers that the prior art materials would work equally as well as that disclosed by the applicant. The specific percentage of palladium to nickel is considered to be an obvious design choice known to one skilled in the art in that the advantages of both materials would be realized by minimizing the possible allergenic effects due to the presence of the nickel component.

9. Marks discloses a method of forming an apertured plate having spray nozzles for any type of apparatus where atomization and flow control are desired, whereby a substrate of materials listed in col. 5 lines 27-30 is electroformed with nickel, gold, palladium and alloys thereof to form an apertured electroformed plate with spray orifices. (see col. 8 line 47 – col. 9 line 10 for the manufacturing method).

10. It would have been obvious to have formed the apertured spray plate of Ivri, or Gueret by the method of electroforming an apertured plate, as taught by Marks, as this has been shown to be an effective method of manufacturing apertured plates which create turbulence in the fluid improving atomization and spray distribution. The materials

Art Unit: 3761

are known to provide durability and corrosion resistance and as such would have been obvious design choices to provide for increased use and to prevent degradation due to contact with the liquid drug applied thereto. In fact the applicant has failed to disclose any criticality as to the materials of the plate being palladium or palladium alloy, palladium nickel or palladium cobalt and alone would be an obvious design choice as the examiner considers that the prior art materials would work equally as well as that disclosed by the applicant. The specific percentage of palladium to nickel is considered to be an obvious design choice known to one skilled in the art in that the advantages of both materials would be realized by minimizing the possible allergenic effects due to the presence of the nickel component.

### ***Response to Arguments***

Applicant's arguments filed 04-15-02 have been fully considered but they are not persuasive.

Abys clearly discloses the electroformation of palladium on a substrate or surface. Electroforming is electrodepositing and electroplating is electrodepositing. The applicant's claims are not limited to the entire plate being made out of the claimed materials. Indeed a plate having a coating of the palladium would read on the claims. If the applicant desires to make a distinction between a plate entirely made by an electroforming process, and a plate coated by an electroformation process (electroplating), more specific claim language is needed. However, the examiner also should stress that such claim language would not make the claims allowable, as one

Art Unit: 3761


skilled in the art of manufacturing metal plates would have found such a process to be an obvious method of making such a plate.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn K Dawson whose telephone number is 703-308-4304. The examiner can normally be reached on M-F 6:30-4:00, first fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 703-308-2702. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3590 for regular communications and 703-306-4520 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

  
Glenn K Dawson  
Primary Examiner  
Art Unit 3761

gkd  
July 8, 2002